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Knowledge Based Systems (KBS) Verification, Validation, Evaluation, and Testing (VVE&T) Bibliography: Topical Categorization

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FOR THE DIRECTOR

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This report contains a topical categorization of the bibliography of the literature about verification, validation, evaluation and test of knowledge-based systems. This bibliography contains 800 entries. This categorization identifies more than 50 different techniques and 69 different tools. The literature discusses 20 different application categories including analytical chemistry, management decision aiding, space, telecommunications, financial, computer configuration, law, medical, laboratory data analysis, product design, manufacturing, speech and text understanding, scheduling, software engineering, mineral exploration, and natural language generation. By far, the most cited application was medical with 153 reference citations. Thirty different specific expert systems were cited in this literature. Eleven different system types were identified including embedded, neural network, control, hybrid and production systems. Of these, production systems were the most cited with 68 explicit references.

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INTRODUCTION

This document contains a topical categorization of the bibliography of the literature about verification, validation, evaluation and test of knowledge-based systems. This bibliography currently contains 800 entries. This categorization identifies more than 50 different techniques and 69 different tools. The literature discusses 20 different application categories including analytical chemistry, management decision aiding, space, telecommunications, financial, computer configuration, law, medical, laboratory data analysis, product design, manufacturing, speech and text understanding, scheduling, software engineering, mineral exploration, and natural language generation. By far, the most cited application was medical with 153 references citing it. Thirty different specific expert systems were cited in this literature. Eleven different system types were identified including embedded, neural network, control, hybrid and production systems. Of these, production systems were the most cited with 68 explicit references.

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